seasonal rhythms and long-term changes, p. 133–150, 1982), are not known at Chamela.

For *E. havanense,* a single rain of the middle magnitude may be sufficient for flowering, because rain does not leave small spots surrounded by dry soil. The waterings, however, were more effective than equivalent rain because interception by the forest canopy was avoided. Despite their survival in a comparatively dry climate, with seasonally extreme soil dryness, *E. havanense* and other species at Chamela probably require more rainfall to cue flowering than do similar species in central Panama (Augspurger, op. cit.). Most rains at Chamela are <1 cm (Bullock, Arch. Met. Geoph. Biocl. Ser. B, in press), so threshold moisture is probably approached sporadically in most years, but spatial unevenness in rainfall, canopy, and soil conditions must promote local asynchrony within species.

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Eschscholzia lemmonii SUBSP. *kernensis* (PAPAVERACEAE), A NEW COMBINATION FOR THE TEJON POPPY.—While studying seed coat microsculpturing of *Eschscholzia* (Clark and Jernstedt, Syst. Bot. 3:386–402, 1978), I noticed that a collection labeled *E. caespitosa* Benth. subsp. *kernensis* Munz [6 May 1935, *Wolf 6738* (UC)] had seed coats unlike those of other samples of that species. This collection was made later in the same year and at the locality of the type specimen of this subspecies.

Although the seeds were unlike those of *E. caespitosa,* they were very similar to the seeds of *E. lemmonii* Greene (Figs. 1–3). Both have serrate ridge crests and foveate facet cells. Subspecies *kernensis* cells have micropapillae, which are somewhat unusual in *E. lemmonii,* and the ridges are more elevated, giving the seeds a somewhat "burlike" appearance, but they resemble the seeds of *E. lemmonii* more than those of any other species. In contrast, the ridges of seed coats of *E. caespitosa* are lower and the crests are generally uniform. Micropapillae are absent and the facet cells are generally polygonal or obscure, but never foveate.

Although the holotype of subsp. *kernensis* lacks the pubescent and nodding buds that are used to distinguish *E. lemmonii* in identification keys, it agrees in many other respects. Both plants have large turbinate receptacles (Figs. 4, 5), large, deep orange flowers, and stout stems and pedicels, contrasted with the small, obconical receptacles, smaller yellow flowers, smaller fruits, and slender stems and pedicels of *E. caespitosa.*

Twisselmann (Fl. Kern County, CA, 1967) also noticed these similarities, commenting that subsp. *kernensis* was "difficult to distinguish from glabrous forms of *E. lemmonii.*" These glabrous forms, unusual in the field, are common in greenhouse-grown plants, which may also have erect buds. Twisselmann's account of the range of the subspecies places it between the main range of *E. lemmonii* in the inner south Coast Ranges and its eastern extent in the northern Tehachapi Mountains, in the same grassland habitats. Both the range and the habitat differ sharply from those of *E. caespitosa,* which occupies open sites in oak woodland and chaparral at higher elevations.

Thus, subsp. *kernensis* differs from *E. lemmonii* consistently only by its burlike seeds. Munz apparently made the decision to include it in *E. caespitosa* because of its erect, glabrous buds, but it shares with *E. lemmonii* a number of features unique in the genus. Therefore, I propose the following combination.

FIGS. 1–3. Scanning electron micrographs of seed coats of *Eschscholzia*. 1. *Eschscholzia lemmonii* subsp. *lemmonii* (*Clark 556*). 2. *Eschscholzia lemmonii* subsp. *kernensis* (*Wolf 6738*). 3. *Eschscholzia caespitosa* (*Clark 570*). Scale refers to each figure. FIG. 4. Holotype of *Eschscholzia lemmonii* subsp. *kernensis* (*Wolf 6358*). Note the turbinate receptacles, similar to those in the next figure. FIG. 5. *Eschscholzia lemmonii* subsp. *lemmonii* (*Clark 556*).

Eschscholzia lemmonii Greene subsp. **kernensis** (Munz) C. Clark comb. nov.—*Eschscholzia caespitosa* Benth. subsp. *kernensis* Munz, Aliso 4:90. 1958.—TYPE: California, Kern Co., Tejon Hills 2 mi nw. of Tejon Ranch Headquarters, 15 Apr 1935, *Wolf 6358* (Holotype, RSA 12994!).

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A NOTE ON THE STATUS OF *Sidalcea nelsoniana* (MALVACEAE).—*Sidalcea nelsoniana* Piper is reported to be endemic to the Willamette Valley of Oregon. Hitchcock et al. (Vasc. Plants Pac. Northw. 3:428, 1961) give its distribution within the Willamette Valley as being from Salem to Portland, west to eastern Tillamook Co. It is reported as endangered by Ayensu and DeFilipps (Endang. Threat. Pl. U.S., Smithsonian Inst. and World Wildl. Fund, Wash., DC, 1978); and as rare and critically endangered,